



March 8, 2006

Reply to Attn of:

Office of Legislative Affairs
REV:mtg

MEMORANDUM FOR THE RECORD

Subject: Hearing before the House Science Committee regarding the FY 2007 Budget Request for NASA; February 16, 2006.

Members

Present: *See attached.*

Witnesses:

- NASA Administrator Michael D. Griffin
- NASA Deputy Administrator Shana Dale

Hearing Summary:

On February 16, 2006, the House Science Committee held a hearing on the FY 2007 Budget Request for NASA. Administrator Griffin and Deputy Administrator Dale testified on behalf of the Agency. Members' questions primarily focused on the adequacy funding in the FY 2007 budget and out years, paying particular attention to the balancing of priorities amongst the human space flight, space and Earth science and aeronautics programs. Several Members stressed the importance of maintaining sufficient funding for scientific research and questioned the long-term impact of the proposed reductions in funding. Members also inquired about the challenges associated with implementing the Exploration Architecture and the priority given to accelerating the Crew Exploration Vehicle (CEV) and associated launch systems versus reductions to new technology development. Also, Members asked about the impacts of an extended gap between the retirement of the Space Shuttle and CEV operational readiness and questioned NASA's plans for transitioning the Shuttle workforce, facilities, systems, and capabilities. Additionally, Members expressed concern with the redirection of and reduced funding for NASA's aeronautics research program. Although Members expressed concern over the budget request and Agency priorities, they praised Administrator Griffin for his candor and for his efforts at making tough decisions and setting priorities.

Summary of Member Opening Remarks:

Chairman Boehlert (R-NY) praised Administrator Griffin for his competence and candor, and said the Administrator had done an excellent job balancing NASA's mission. However, the Chairman cautioned that he was uneasy about the way the FY 2007 budget "de-emphasizes" the Agency's science and aeronautics programs relative to human space flight activities. The Chairman stated he supports the Vision for Space Exploration, but saw no reason to move

forward any faster than the President's original plan. The Chairman cited the Space Shuttle and International Space Station (ISS) programs to underscore the difficult budgetary choices the Agency is facing and questioned whether their cancellation would even save money. The Chairman stated he would be willing to support an increase in overall NASA funding, so long as the money went to the sciences and not human spaceflight programs. He concluded by commenting on the issue of scientific openness, stressing that the Agency has been responsive to the Committee's inquiries, adding that given the steps NASA has taken to revise its policies in this area, he had "high hopes" that NASA would become a model for other agencies to follow.

Ranking Democrat Gordon (D-TN) said it was time for the Committee to step back and evaluate the implementation of the Vision for Space Exploration, considering the Administration's budget request fails to adequately fund the totality of the mission NASA has been tasked with carrying out. The Ranking Democrat cited cuts to life sciences, microgravity research and new exploration technology development as examples of the Administration's unwillingness to commit to the Vision. Additionally, he said that while he supports exploration, it has to be paid for without other important missions being compromised. Finally, Ranking Democrat Gordon indicated that he does not want Congress signing up for an under funded program whose costs outweigh its benefits and offered that NASA's overall funding should either be increased or the President's initiative reconsidered altogether.

Space and Aeronautics Subcommittee Chairman Calvert (R-CA) said the Authorization Bill process highlighted the lack of funding that is keeping NASA from doing all it would like in the areas of space, aeronautics and science. He talked about how a multibillion budget shortfall forced NASA to move funding from Science and Exploration to cover Space Shuttle-related costs. The Chairman also talked about his efforts to increase funds for NASA as part of the Emergency Supplemental Appropriations request for Hurricane Katrina repair and recovery, and how that event has put even more stress on the Agency. He noted that NASA has made difficult choices to ensure development of the CEV, improved Shuttle safety and that international obligations are met. However, he stressed the importance of continuing with the necessary improvements to NASA financial management and getting the Agency's fiscal house in order. After citing the progress that other nations are making in their space flight efforts, the Chairman concluded by saying NASA should maximize every penny and have a balanced program to keep the U.S. in the lead.

Space and Aeronautics Subcommittee Ranking Democrat Udall (D-CO) said the FY 2007 budget request is a good faith effort by the Administrator to work within the constraints he has been given, but its budget reductions and program deferrals or cancellations will have serious consequences. He discussed his interest in the aeronautics programs and NASA's R&D activities. Ranking Democrat Udall also said he was discouraged by funding reductions to air traffic management research and development, when NASA had "pledged" to support the Joint Planning and Development Office (JPDO), adding that he felt NASA was being forced to eat its seed corn to address its near-term funding issues. Finally, he stated he could not understand why, given the Administration's Competitiveness Initiative, NASA's research funding was being reduced.

Summary of Major Questions/Discussions:

Chairman Boehlert (R-NY) expressed concerns with the accuracy of the CEV cost estimates and asked about the level of certainty that can be attributed to the CEV's budget estimate and how those figures were determined. Griffin replied that most first-time aerospace development

programs experience cost overruns of about 30%. Adding that NASA's budget for the CEV is roughly at a 65 % confidence level.

Boehlert asked if NASA was going to make an April 1, 2006, reporting deadline (in the NASA Authorization Act of 2005) on the impact of CEV spending on other NASA programs. Griffin indicated that it was unlikely that the Agency would make the deadline but that NASA would get the Committee the information as soon as it can. Chairman Boehlert requested a estimate on when the Committee might expect the report.

Boehlert was concerned about whether enough money was being banked to fund CEV during its peak development years. Specifically, he wanted to know how much of the FY 2007 request for CEV is reserve; what will be the peak year of development spending; and how that would change if the CEV were accelerated. Griffin cautioned that because NASA was in the midst of a source selection, and he could not provide this information in a public forum, but offered that NASA would provide this info to the Committee staff in private. Boehlert expressed the need for the Committee to be kept informed.

Ranking Democrat Gordon (D-TN) reminded the Administrator the NASA Authorization Act of 2005 has firewalls preventing the poaching of other areas of the Agency to fund the Vision. He then asked for any available suggestions/alternatives to the Exploration program that may be more prudent in the long-run and not put the Agency in an all-or-nothing situation. Griffin acknowledged the perception of human space flight's cannibalization of science, but noted that the science program grew from 24% of NASA funding to 32% over the past 10 years. And, while this was at the expense of the human space flight programs, "constituency groups" didn't find a problem with this situation.

Gordon asked if NASA would save money if it slowed down development of CEV and return humans to the Moon beyond 2018. Griffin said yes, that any extension of the dates would save money.

Space and Aeronautics Subcommittee Chairman Calvert (R-CA) expressed concern about delaying a return to the Moon beyond 2018, when China plans to land on the Moon by 2017. Chairman Calvert mentioned his role on the Armed Services Committee and asked about NASA cooperation with the Department of Defense (DoD) as a means of more efficiently and effectively using limited dollars for exploration and other purposes. Griffin said he has good relationships with his DoD counterparts and recently participated in a series of meetings with senior DoD officials to make sure everyone was in synch. He also noted there were opportunities for technological synergies that the group discussed.

Chairman Calvert asked Griffin to explain the importance of minimizing the gap between the retirement of the Shuttle and the coming online of the CEV. Griffin said the primary strategic issue involves retaining a workforce with the necessary technical skills. If the Agency was forced to reduce its numbers it would not get that skilled workforce back, resulting in "stumbling" and "halting" progress, with the potential for increased flight risk.

Space and Aeronautics Subcommittee Ranking Democrat Udall (D-CO) expressed concern that the FY 2007 Budget Request proposes a reduction to the aeronauts program of \$175 million, and asked Griffin to respond to his concerns regarding Aeronautics funding, and his thoughts on the JPDO and Next Generation Air Transportation System program. Griffin said he believed

NASA is meeting its overall commitments to the NGATS program, but took the question for the record. With regard to Aeronautics, Griffin said the FY 2007 budget submission is actually up slightly compared to last year. He also noted that the Aeronautics program is being strategically re-vectored to return to the fundamentals of aeronautical research.

Udall then asked whether Aeronautics had enough money to do its work based on the five year runout. Griffin said there was enough money in the runout to make NASA great again in aeronautics and that the program is properly prioritized. Next, Udall asked for an update on where NASA presently stands (with respect to a provision in the NASA Authorization Act of 2005) on establishing a pilot program for state and local governments to use remote sensing data. Griffin took the question for the record.

Udall concluded by asking why there is a 15% cut in the Science Mission Directorate's (SMD) Research and Analysis program. Griffin replied that the cuts are due to the slowing down of Science's rate of growth related to human space flight and the focus on doing as many science missions as possible. Griffin acknowledged that he has heard the concerns of working scientists and is willing to rethink the issue to make sure NASA has the right balance.

Gutknecht (R-MN) asked about NASA's progress in spending humans to Mars and wanted to know the latest estimate of what that will cost. Griffin said the Agency was presently coping with the issue of reclaiming capabilities to ensure the return of astronauts to the moon and that NASA does not presently have a cost estimate for a mission to Mars.

Gutknecht questioned the value of what will likely be an expensive program when compared to doing things on Earth that could yield bigger results. Griffin said that debate has been ongoing over the last two years, but was largely settled with the passage of the NASA Authorization Act of 2005. He then pointed to the challenge of retiring the Shuttle and bringing the CEV online, but stressed that NASA's human space flight program needed the most nurturing.

Gutknecht wanted to be sure the American people would be part of the overall discussion on the Vision because they want real scientific breakthroughs and results that matter in their everyday lives. Griffin agreed that it is extremely important to gauge the public's interest and cited a Gallup poll that was done at the end of last year that indicated 75% of people either supported or strongly supported NASA's mission, so long as the Agency's budget was around 1% of the overall federal budget.

Gutknecht cautioned that the 75% should not be read as strictly supporting human space flight and that it should be put in context with everything else NASA does. Griffin agreed and restated his belief that NASA was not slashing its science programs.

Green (D-TX) asked about the plans for using the \$500 million budgeted for ISS commercial crew/cargo services. Griffin said NASA should focus on cutting edge technology and exploration beyond low Earth orbit. As such, NASA is committed to putting up this money over the next five years as an incentive for industry to produce demonstrations as early as 2008 and operational systems that could begin re-supplying the ISS by 2010.

Green asked if there was any way to provide incentives to allow personnel displaced by these budget cuts to move either to or from industry. Griffin said NASA actually has a net budget increase and that the market will naturally adapt to take care of any displaced personnel.

Schwarz (R-MI) said a bulk of his constituents work for both the University of Michigan and Michigan State and wanted to know why the emphasis now seems to be going back to manned space flight, as opposed to unmanned scientific missions or bench science. Griffin said NASA still has a huge science program and he is willing to reexamine the 15% cut to Research and Analysis programs. However, he stressed that the emphasis on human space flight is of strategic importance to our nation and that NASA has to deal with these bumps in the road to ensure it gets on the right path.

Costa (D-CA) inquired about NASA's efforts at exploring cost-sharing of the Vision with the Europeans, Russians and other international partners. Deputy Administrator Dale said the Vision makes a strong statement in favor of international cooperation and that she recently met with several heads of agencies about potential cooperation on the Exploration initiative. Dale also noted that NASA is planning on having an exploration workshop at the end of April that will include commercial industry, academic community, scientific community, as well as its international partners. Costa asked for a report back to the Committee on how the effort has gone and an anticipated cost-estimate breakdown.

Costa also asked about the lessons learned from the ISS experience as it relates to the prospect of cost sharing on a large-scale program. Dale said the primary lessons have been to deal with partners on a no exchange of funds basis and to be sure that none of their technology is on the critical path.

Feeney (R-FL) discussed his recent trip to China and cautioned that China can either be a cooperative competitor or a dangerous adversary. He then asked for examples on how space exploration fosters American leadership and wanted to know how an extended gap between Shuttle and CEV would strategically impact the U.S.'s safety. Griffin said we would all be better off if we found a way to cooperate on space exploration. With regard to the gap, he said it all boils down to money and that if people are not being paid to work on human space flight, they will go elsewhere and not come back. He went on to explain how this would be a disadvantage because the country would be forced to recreate that capability when it wants it down the road.

Honda (D-CA) questioned why NASA has decided to cancel SOFIA at this time, when the program been restructured to followed the advice of its own independent review. Dale said SOFIA has incurred significant technical, cost and schedule delays over the past two years and all of that will be going into a new intensive project review done in cooperation with the German Space Agency. In addition, Griffin explained that because the program continues to encounter significant technical issues related to the airplane and NASA needs to review it against the other competing science missions. Honda then asked whether all of these issues had been identified during earlier reviews. Specifically, he asked whether the vehicle itself was the primary issue. Griffin said the modifications to airplane were proving to be more of a technical hurdle than originally anticipated. He added that the question now is whether the program is really at the end of its technical problems to the extent that the science will work.

Akin (R-MO) wanted to know why NASA's Aeronautics program was being retuned to focus on fundamental research versus the development of flight demonstrations. He also wanted to know about the Agency's commitment to hypersonics and the impact program cancellations have on NASA's relationship with private industry. Griffin said the first order of business is to determine what NASA should be doing and that the contractor relationships will work themselves out. Griffin also said that hypersonics is a part of the fundamental research that NASA wants to

pursue, but some of the past vehicle demonstrations are not things that the Agency will continue to do.

Akin asked if the problem is specifically related to the X-43C and if the vehicle just doesn't meet NASA's needs. Griffin said he would provide the Congressman with a fully detailed answer and took the question for the record.

Requests for Information

1. Chairman Boehlert (R-NY) requested an estimate of when NASA would submit a report on the impact of CEV spending on other NASA programs required in the NASA Authorization Act of 2005. [ESMD]
2. Chairman Boehlert requested information on how much of the FY 2007 budget request for CEV is reserves; the anticipated peak year of CEV development spending; and, how this would change if CEV were accelerated. [CLOSED – Info provided to staff on March 6, 2006].
3. Administrator Griffin offered to provide Ranking Democrat Udall (D-CO) the status of NASA's commitment to the JPDO and the Next Generation Air Transportation System program. [ARMD]
4. Ranking Democrat Udall (D-CO) requested an update on NASA's efforts to establish a pilot program for state and local entities to use remote sensing data, as called for in the NASA Authorization Act of 2005. [SMD]
5. Representative Costa (D-CA) asked that NASA provide the Committee with a report on the Agency's efforts to secure international cooperation on the Vision for Space Exploration and an anticipated cost estimate associated with these potential partnerships. [OER and ESMD]
6. The Administrator offered to provide Representative Akin (R-MO) with information related to the Agency's position on the X-43C program. [ARMD]

A copy of the NASA written testimony can be found at the Office of Legislative Affairs website at <http://legislative.nasa.gov/>.



Russell E. Vieco
Legislative Affairs Specialist
Office of Legislative Affairs

Enclosure

Enclosure

HOUSE COMMITTEE ON SCIENCE
Members Present at the Hearing on February 16, 2006

Sherwood Boehlert, Chairman (R-NY)	Bart Gordon, Ranking Member (D-TN)
Ralph Hall (R-TX)	Mark Udall (D-CO)
Ken Calvert (R-CA)	Lincoln Davis (D-TN)
Lamar Smith (R-TX)	Al Green (D-TX)
Dana Rohrabacher (R-CA)	Darlene Hooley (D-OR)
Roscoe Bartlett (R-MD)	Eddie Bernice Johnson (D-TX)
Vernon Ehlers (R-MI)	Daniel Lipinski (D-IL)
Gil Gutknecht (R-MN)	David Wu (D-OR)
Todd Akin (R-MO)	Michael Honda (D-CA)
Tom Feeney (R-FL)	Jim Costa (D-CA)
Bob Inglis (R-SC)	Charlie Melancon (D-LA)
Joe Schwarz (R-MI)	

Officials-in-Charge of Headquarters Offices (March 8, 2006)

Deputy Administrator/Ms. Dale

Associate Administrator/Mr. Geveden

Chief of Staff/Mr. Morrell

Deputy Chief of Staff and White House Liaison/Mr. Jezierski

Assistant Administrator for Security and Program Protection/Mr. Saleeba

Associate Administrator for Aeronautics Research Mission Directorate/Dr. Porter

Associate Administrator for Exploration Systems Mission Directorate/Dr. Horowitz

Associate Administrator for Institutions and Management/Mr. Luedtke (Acting)

- Assistant Administrator for Diversity and Equal Opportunity/Dr. Hayden-Watkins
- Assistant Administrator for Human Capital Management/Ms. Dawsey
- Assistant Administrator for Infrastructure and Administration/Ms. Dominguez (Acting)
- Assistant Administrator for Procurement/Mr. Luedtke
- Assistant Administrator for Small and Disadvantaged Business Utilization/Mr. Balinskas (Acting)
- Executive Director, NSSC/Mr. Arbutnot

Associate Administrator for Program Analysis and Evaluation/Dr. Pace

Associate Administrator for Science Mission Directorate/Dr. Cleave

Associate Administrator for Space Operations Mission Directorate/Mr. Gerstenmaier

Chief Engineer/Mr. Scolese

Chief Financial Officer/Ms. Sykes

Chief Health and Medical Officer/Dr. Williams

Chief Information Officer/Ms. Dunnington

Chief Safety and Mission Assurance Officer/Mr. O'Connor

Chief of Strategic Communications/Mr. Davis

- Assistant Administrator for Education/Ms. Diaz (Acting)
- Assistant Administrator for External Relations/Mr. O'Brien
- Assistant Administrator for Legislative Affairs/Mr. Chase
- Assistant Administrator for Public Affairs/Mr. Mould

Director, Innovative Partnerships Program Office/Ms. McKenzie

Director, Integrated Enterprise Management Program/Mr. German

General Counsel/Mr. Wholley

Inspector General/Mr. Cobb

Directors, NASA Centers

Ames Research Center/Mr. Christensen (Acting)

Dryden Flight Research Center/Mr. Petersen

Glenn Research Center/Dr. Whitlow

Goddard Space Flight Center/Dr. Weiler

Jet Propulsion Laboratory/Dr. Elachi

Johnson Space Center/Mr. Coats

Kennedy Space Center/Mr. Kennedy

Langley Research Center/Ms. Roe

Marshall Space Flight Center/Mr. King
Stennis Space Center/Dr. Gilbrech

cc:

Assistant Associate Administrator/Ms. Johnson
Director, Strategic Investments/Mr. Shank
Executive Secretariat/Mr. Box
Office of the Administrator/Ms. Hutchinson
Office of the Administrator/Ms. Mays
Office of the Administrator/Ms. Soper
Office of the Deputy Administrator/Dr. Spyke
Senior Advisor to the Deputy Administrator/Mr. Hopkins
Senior Advisor to the Deputy Administrator/Mr. Ralsky